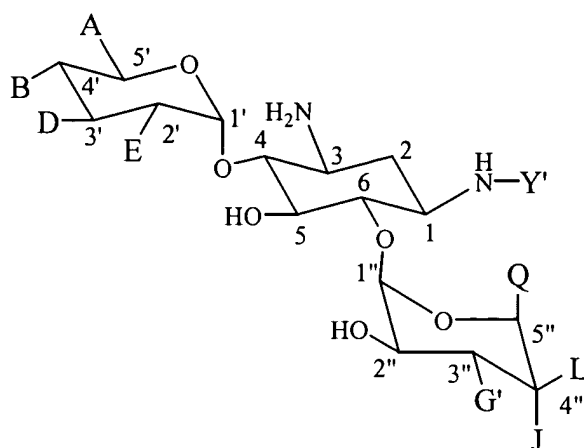


Claims

What is claimed is:

1. An antibody produced in response to a compound of the formula

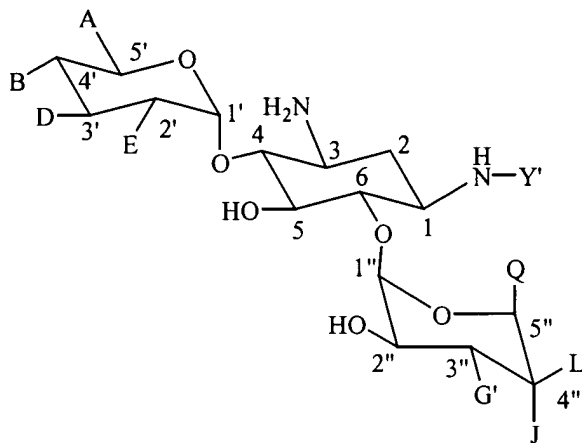


wherein A is CH_2NH_2 , CHCH_3NH_2 , or $\text{CHCH}_3\text{NHCH}_3$; B is H or OH; D is H or OH; E is NH_2 or OH; G' is NH_2 , NHCH_3 , NH-T , or $\text{NCH}_3\text{-T}$; J is H or OH; L is H, CH_3 , or OH; Q is H or CH_2OH ; Y' is H, $\text{C(=O)CH(OH)CH}_2\text{CH}_2\text{NH}_2$, or T; T is a carrier; and T is present in only one of G' or Y'.

2. The antibody of claim 1 wherein the carrier is selected from the group consisting of poly(amino acid)s, polysaccharides, proteins, glycoproteins, and nucleic acids.

3. An assay method for determining an aminoglycoside comprising:

combining a sample suspected of containing the aminoglycoside with an antibody specific for the aminoglycoside and with a reagent of the formula

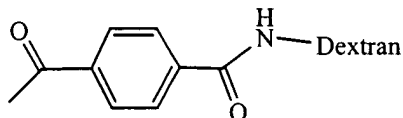


wherein A is CH_2NH_2 , CHCH_3NH_2 , or $\text{CHCH}_3\text{NHCH}_3$; B is H or OH; D is H or OH; E is NH_2 or OH; G' is NH_2 , NHCH_3 , NH-T , or $\text{NCH}_3\text{-T}$; J is H or OH; L is H, CH_3 , or OH; Q is H or CH_2OH ; Y' is H, $\text{C(=O)CH(OH)CH}_2\text{CH}_2\text{NH}_2$, or T; T is a label; and T is present in only one of G' or Y'; the reagent comprising the analyte analog of the aminoglycoside and forming a detectable complex with the antibody; and

determining the presence or amount of the detectable complex as a measure of the aminoglycoside in the sample.

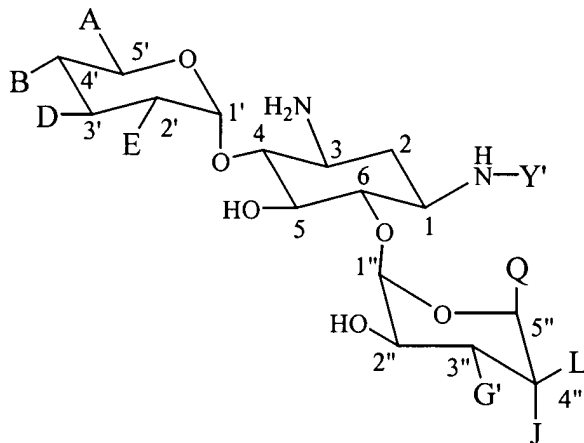
4. The assay method of claim 3 wherein the label is selected from the group consisting of enzymes, fluorescent compounds, luminescent compounds, radioactive isotopes, polymers, and microparticles.

5. An assay method according to claim 3 in which A is CH_2NH_2 , B is H, D is H, E is NH_2 , G' is NHCH_3 , J is OH, L is CH_3 , Q is H, and Y' is



6. An assay method for determining an aminoglycoside comprising:

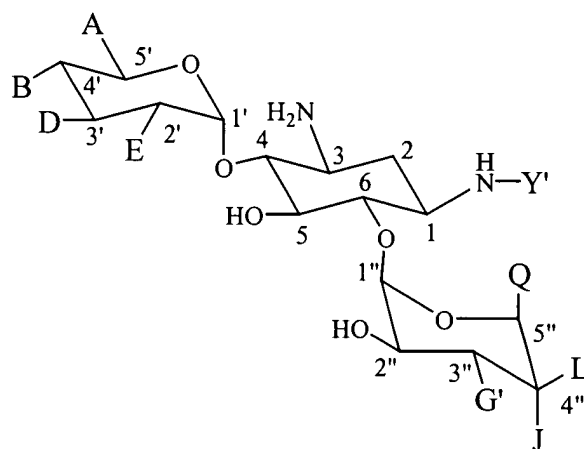
combining a sample suspected of containing the aminoglycoside with an antibody produced in response to a compound of the formula



wherein A is CH_2NH_2 , CHCH_3NH_2 , or $\text{CHCH}_3\text{NHCH}_3$; B is H or OH; D is H or OH; E is NH_2 or OH; G' is NH_2 , NHCH_3 , NH-T , or $\text{NCH}_3\text{-T}$; J is H or OH; L is H, CH_3 , or OH; Q is H or CH_2OH ; Y' is H, $\text{C(=O)CH(OH)CH}_2\text{CH}_2\text{NH}_2$, or T; T is a carrier; and T is present in only one of G' or Y' and with a reagent comprising a complex of an analyte analog of the aminoglycoside and a label whereby the reagent forms a detectable complex with the antibody; and

determining the presence or amount of the detectable complex as a measure of the aminoglycoside in the sample.

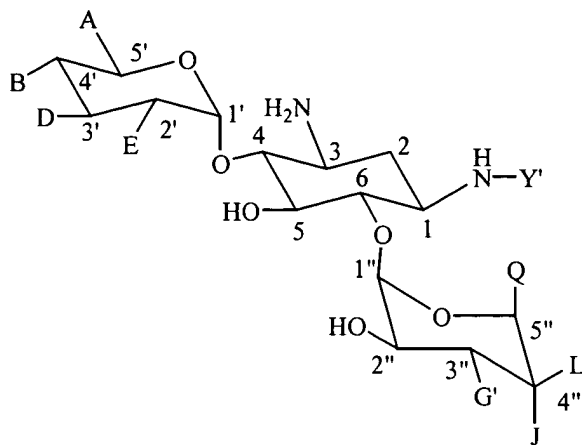
7. The assay method of claim 5 wherein the carrier is selected from the group consisting of poly(amino acid)s, polysaccharides, proteins, glycoproteins, and nucleic acids.
8. A test kit for determining an aminoglycoside in a sample comprising in packaged combination a complex of an analog of the aminoglycoside and a label and an antibody produced in response to a compound of the formula



wherein A is CH_2NH_2 , CHCH_3NH_2 , or $\text{CHCH}_3\text{NHCH}_3$; B is H or OH; D is H or OH; E is NH_2 or OH; G' is NH_2 , NHCH_3 , NH-T , or $\text{NCH}_3\text{-T}$; J is H or OH; L is H, CH_3 , or OH; Q is H or CH_2OH ; Y' is H, $\text{C(=O)CH(OH)CH}_2\text{CH}_2\text{NH}_2$, or T; T is a carrier; and T is present in only one of G' or Y'.

9. The test kit of claim 8 wherein the carrier is selected from the group consisting of poly(amino acid)s, polysaccharides, proteins, glycoproteins, and nucleic acids.

10. A test kit for determining an aminoglycoside in a sample comprising in packaged combination an antibody specific for the aminoglycoside and a reagent of the formula



wherein A is CH_2NH_2 , CHCH_3NH_2 , or $\text{CHCH}_3\text{NHCH}_3$; B is H or OH; D is H or OH; E is NH_2 or OH; G' is NH_2 , NHCH_3 , NH-T , or $\text{NCH}_3\text{-T}$; J is H or OH; L is H, CH_3 , or OH; Q is H or CH_2OH ; Y' is H, $\text{C(=O)CH(OH)CH}_2\text{CH}_2\text{NH}_2$, or T; T is a label; and T is present in only one of G' or Y'.

11. A test kit according to claim 7 in which A is CH_2NH_2 , B is H, D is H, E is NH_2 , G' is NHCH_3 , J is OH, L is CH_3 , Q is H, and Y' is

